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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,677	03/22/2001	Rainer Patzel	LMPY-4410	5204
28584	7590	03/31/2005	EXAMINER	
STALLMAN & POLLOCK LLP SUITE 2200 353 SACRAMENTO STREET SAN FRANCISCO, CA 94111			NELSON, FREDA ANN	
			ART UNIT	PAPER NUMBER
			3639	

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/816,677

Applicant(s)

PATZEL ET AL.

Examiner

Freda Nelson

Art Unit

3629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06/04/023.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This is in response to a letter for a patent filed on March 22, 2001 in which claims 1-7 was presented for examination. Claims 1-7 are pending.

#### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 06/04/02 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner. A copy of PTO-1449 is attached hereto.

#### ***Drawings***

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the informal drawings are not of sufficient quality. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, claims 1-7 only recite an abstract idea. In claims 1-7 the recited steps of merely determining a predicted lifetime of one or more components of a laser system; estimating costs for the repair and/or replacement of the components in advance; and scheduling the costs to be paid does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper.

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claims 1-7 are deemed to be directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4, and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou et al. (Patent Number 5,260,961) in view of Cornett et al. (5,216,612).

5. In claims 1- 4, and 6-7, Zhou et al. disclose that gas and component lifetimes are reported in terms of pulses and "continuous operating hours; and more specifically recent PPI literature on these commercial devices asserts: "[G] as consumption for 260 hour test averaged about 35 cents per hour wherein test data suggested that discharge tube replacement was desirable after about 300 hours of 2 kHz operation...a new tube with mount can be purchased for \$1380, or PPI can replace only the tube at a cost of \$590 (col. 5, lines 14-25). Zhou et al. does not disclose scheduling the costs to paid at one or more predetermined times. Cornett et al. disclose that replaceable parts are managed using time-phased requirement techniques wherein the planning cycle consists of three steps. First, the time-phase parts requirements are calculated and these requirements come from three sources: parts required to support time-phased maintenance requests, parts defined on planning bills and anticipated parts replacement due to parts exceeding the mean-time

failure rate (col. 15, lines 19-26-40). Cornett further disclose that although the system calculates when to place an order or to advise the rescheduling of an existing purchase order, the Buyer is responsible for the actual company commitment; and the system will not automatically issue or reschedule a purchase order (col. 33, lines 61-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Zhou et al. to include the feature of Cornett to order spare components based on predicted maintenance rather than prescribed inventory levels (Cornett, Abstract).

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou et al.(Patent Number 5,260,961) in view of Carlesi et al. (Patent Number ) 6,028,880).

7. In claim 5, Zhou et al. disclose that particularly useful wavelengths and other operating characteristics arise from use of rare-gas-halogen excimers, especially rare-gas monohalides such as xenon chloride, XeCl, krypton fluoride, KrF, and to lesser degree argon and xenon fluoride –ArF and XeF (col. 1, lines 29-39). Zhou et al. further disclose that gas and component lifetimes are reported in terms of pulses and “continuous operating hours; and more specifically recent PPI literature on theses commercial devices asserts: “[G] as consumption for 260 hour test averaged about 35 cents per hour wherein test data suggested that discharge tube replacement was desirable after about 300 hours of 2 kHz operation...A new tube with mount can be purchased for \$1380,

or PPI can replace only the tube at a cost of \$590 (col. 5, lines 14-24). Zhou et al. does not disclose that the one or more components includes a line-narrowing module. Carlesi et al. discloses a KrF excimer laser system comprising conventional laser chamber 20 containing two elongated electrodes 22 and a laser gas comprised approximately 0.1% fluoride, 1% krypton and 98.9% neon (col. 4, lines 49-54; FIG. 3). Carlesi et al. further disclose that a resonance chamber is defined by outputs coupler 26 and line narrowing module 28 (col. 4, lines 57-58; FIG. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Zhou et al. to include the feature of Carlesi et al. in order to have an excimer laser system with an automatic fluorine control system to permit precise control of the fluorine concentration within the laser chamber (Carlesi, col. 3, lines 28-31).

### ***Conclusion***

8. The examiner has cited prior art of interest, for example:

- 1) Karney (Patent Number 3,582,822), which discloses a laser flash tube.
- 2) Killpatrick et al. (Patent Number 6,208, 414), which disclose a modular laser gyro.
- 3) Zarkar, Kaven, "requirements for next-generation gas-flow components", March 2000, Solid State technology, v43, n3, p27

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freda Nelson whose telephone number is (703) 305-0261. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on (703) 308-2702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Freda Nelson  
Examiner  
Art Unit 3629



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